

Despite Hurricane Charley, New ER at Port Charlotte Hospital Gets "Clean Bill of Health" Due to Impact-Resistant Windows

PROJECT FACTS

LOCATION

Port Charlotte, Florida

GENERAL CONTRACTOR

Tab Glass and Window Co., Inc.
St. Petersburg, Florida

GLASS LAMINATOR

Oldcastle Glass®
Tampa, Florida

INTERLAYER MANUFACTURER

Solutia Inc.
St. Louis, Missouri

CONSTRUCTION FIRM

Skanska USA Building Inc.
Parsippany, New Jersey

ARCHITECT

Belinda C. Currin, Odell Associates Inc.
Richmond, Virginia

DOCTORS AND PATIENTS HAD ONLY A 20 MINUTE WARNING THAT THE WRATH OF HURRICANE CHARLEY WAS HEADING DIRECTLY FOR THE BON SECOURS-ST. JOSEPH HOSPITAL IN PORT CHARLOTTE, FLORIDA ON AUGUST 13, 2004. HURRICANE CHARLEY, WHICH WAS EXPECTED TO IMPACT TAMPA, SUDDENLY INCREASED FROM A CATEGORY 2 TO A CATEGORY 4 STORM (WINDS EXCEEDING 150 MPH) AND SWITCHED COURSE TO PASS DIRECTLY OVER THE HOSPITAL.

Thanks to good planning and the hospital's new Emergency Center's hurricane-resistant design, the emergency center sustained no damage. In fact, Eddie Estes, facility manager, verified that not even one single impact-resistant window was damaged.

The rest of the hospital building, which was built prior to the enactment of Florida's new building code, required extensive repairs and more than \$100,000 in labor and materials to replace its broken glass. In fact, the ER operated uninterrupted, treating 175-200 patients per day. Bon Secours was the only ER in Port Charlotte accepting patients in any condition throughout the storm and its aftermath.

ER Physician Dr. Pedro Perez said, "We operated as though it were a 'normal' ER day despite the hurricane and without boarded-up windows during the storm." Perez added that they treated injuries ranging from lacerations and fractures to electrocutions and "crush" injuries with severe chest and abdominal damage. Dr. Perez said, "Our new addition is excellent."

Carol Rothman, director of emergency department and intensive care, said Bon Secours' ER operated "normally" because the addition is built to Florida's new hurricane standards, and the windows are laminated and insulated for protection, noise reduction and energy conservation. "You could hear a little bit of wind inside, but outside the storm was raging and debris was flying like missiles through the air."

The Emergency Center was protected by window systems made with StormGlass™ impact-resistant glass by Oldcastle Glass®. StormGlass™ is made with a tough polyvinyl butyral (PVB) Saflex interlayer made by Solutia Inc. that gives the glazing system extraordinary strength.



project profile (cont.)

The glazing process for StormGlass™ includes the combination of two or more panes of glass bonded together with the Saflex® plastic interlayer through a process of heat and pressure. Upon impact from hurricane force winds, the glass may crack, but the fragments tend to adhere to the protective plastic interlayer. Keeping the glass in place not only provides protection from dangerous flying or falling glass, which can cause serious injuries or fatalities, but it also protects the building envelope.

These types of glazing systems must go through rigorous testing to ensure that they are able to withstand the impacts of flying debris at 120 mph. "The windows in the ER surpassed the 120 mph requirement and stood up to wind speeds estimated at 150 mph," says John Bush, director of laminated products at Oldcastle Glass®.

Ed Schoen, vice president and manager of Tab Glass and Window, the addition's glazing contractor, said the addition has 2,600 square feet of Oldcastle Glass®.



Protecting People First Foundation

And while impact-resistant windows are more expensive than regular windows, in many cases it will take just one hurricane for windows with laminated glass to pay for themselves. Schoen adds, "With impact glass, you don't need to fortify windows. That's important," he adds, "because the 20-minute warning Bon Secours had was nowhere near the time needed to board up its windows."

"When you see that kind of wind," says Gary Miles, risk manager for the Bon Secours Healthcare Group, "and palm trees careening at our building at 150 mph; it surprised me that the addition remained intact."

The hospital's original building sustained major damage with a torn-off roof, broken windows everywhere and extensive water damage. Throughout the city, cars, trucks and utility poles were tossed like toys; and homes were blown to bits. In fact, three months after the storm, the county remained a declared disaster.

Both the architect, Belinda C. Currin, and Greg Ritter, Skanska's construction superintendent, take great pride in the building's design and construction- which made surviving Hurricane Charley, well, a breeze.



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